REMARKS

Claims 1 – 3, 5 – 8 & 10- 14 are pending in the application. Claims 4 and 9 were canceled. Claims 1 - 3 and 5 -14 stand rejected.

Claim Rejection 35 USC 102/103

Claims 1-3 and 5-14 were rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2001 146457 (X reference from Int'l Search Report), ZA 9100876 (X reference from Int'l Search Report), Heathman et al. '990, Montgomery '012, '636, '503, '633, Darwin '158 or '343, or Creel '802 A1.

References cited in the International Search Report:

JP 2001 146457 relates to cement paste (mortar) suitable for site casting and does not disclose encapsulating the super absorbent material.

Likewise, ZA 9100876 relates to mortar and cast concrete and does not disclose encapsulating the super absorbent material.

Other References:

Heathman relates to methods and compositions involving a cement slurry and a liquid phase. Heathman refers to encapsulation only of a gas generating additive such as aluminum powder, see paragraph [0014] or paragraph [0016]. The thickener is optionally present in the liquid solution, not in the cement slurry here. Then, the method involves pumping first the cement slurry in the wellbore, and afterwards the liquid solution is injected. This is far from the currently claimed composition, especially since the Applicant has amended claim 1 to further emphasize that the material able to swell in contact with underground water is dry blended with cement before making a "single" slurry. The prior art being teaching away the possibility of mixing first cement with the super-absorbent, accordingly, Applicants consider this difference as being a sufficiently patentable distinction in view of *In re Thorpe, 227 USPQ 964*.

The Montgomery '012', '636', '503, '633 relate to the concrete industry and aim at finding an additive for improving the flowability of concrete cement composition. Again, this is opposite of the presently claimed invention since here the composition is intended for well cementing and thus shall be more than just flowable through a conduit. Furthermore, all of Montgomery's documents are silent about the possibility of coating a super-absorbent.

The Darwin '158' & '343 relates also to the concrete and mortar industry and it is well explained in this document that concrete industry does have flowability problems as the amount of water used in very low in order to keep acceptable setting times. Basically, it is taught to replace part of the water used to form the concrete flowable material by a polymer in order to increase the viscosity of said water while still keeping some flowability, see col. 1, line 61 to col. 2, line 37. Here another time, the intent is not connected to the object of the present invention and none of these documents mention the possibility to encapsulate a super-absorbent polymer; quite the opposite since encapsulating would be opposite of both Darwin's documents intended purposes.

The Examiner has referred to Creel; however, Creel makes clear that the swelling material is first introduced into the wellbore and then only the cement slurry is pumped. This is different from the invention as presently claimed by the Applicant; moreover, no possibility of encapsulating the super-absorbent material is mentioned nor suggested.

The Applicants want to emphasize that one of the challenge of the present invention was to form self-healing cement suitable in the oilfield industry where the constraint is to keep acceptable pumpability with forming a slurry that after setting will be suitable to form a cement sheath providing adequate compressive strength, isolation, etc. Accordingly, adding a super absorbant polymer to a slurry that is supposed to be pumped was definitely a challenge and none of the prior art cited do address such type of problem. Encapsulating such super-absorbent allows delay in swelling when present in the slurry, otherwise an immediate swelling may be observed and thus an increase of the slurry viscosity would be detrimental to any potential cement placement in a wellbore.

No documents refer to the encapsulation of such super-absorbent polymer and accordingly there was no reasonable expectation of success of forming a slurry still pumpable for a skilled artisan facing the present problem. Furthermore most of the prior art cited are teaching away (see Darwin '158 and '343) this solution as encapsulation is referred only in Heathman in this is in connection with gas generating additives.

Applicant believes this reply to be fully responsive to all outstanding issues and that the present set of claims is now ready for allowance. In fact, all the claims not discussed in the present communication are dependent claims upon patentable independent ones. The Commissioner is authorized to charge any fee associated with the submission of this response to Deposit Account No. 50-2183 (Ref. No. 21.1244). The Examiner is invited to contact the undersigned attorney at 281-285-8606 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully Submitted,

/David Cate/ August 24, 2010

_____ Date:_____

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